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10/615,002	07/08/2003	Kevin Barry Ray	58575-281049	8143

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EXAMINER

FUNK, STEPHEN R

ART UNIT PAPER NUMBER

2854

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/615,002

Applicant(s)

RAY ET AL.

Examiner

Stephen R Funk

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 22-66 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/6/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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The disclosure is objected to because of the following informalities: On page 14 line 8, page 16 line 28, and page 17 line 2 “platen” is misspelled. Appropriate correction is required.

The use of trademarks have been noted in this application on page 8 lines 15 - 21. All letters of each trademark should be capitalized it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claims 7, 8, 16, 17, 50, and 51 are objected to because of the following informalities:

In each of claims 7, 8, 16, and 17 “a catalyst” is a double recitation of the same in claim 1 line 6. This could be corrected by simply replacing “a” with --the--.

In claim 50 line 2 “a substrate” is a double recitation of the same in claim 1 line 2. Furthermore, “a coating mixture” would appear to be the same as the image forming layer.

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 - 6, 9 - 11, 25, 31 - 37, 40 - 48, 50, 52 - 54, 57, and 62 - 66 are rejected under 35 U.S.C. 102(e) as being anticipated by Deutsch et al. (US 6,691,618).

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Deutsch et al. teach providing a substrate (column 11 lines 10 - 12) and an image forming layer comprising at least one polymeric material (column 10 line 6+, column 16 line 53+), imagewise contacting the image forming layer with a catalyst (column 6 line 50 - column 7 line 50), and thermally treating the image forming layer (column 4 line 65, column 8 lines 15 - 16, column 8 lines 48 - 49, column 9 line 48+) so that the portions of the image forming layer contacted with the catalyst are less developable in a developer.

With respect to claims 2 - 4 the polymeric binder of Deutsch et al. reacts and crosslinks upon the thermal treatment.

With respect to claims 5 and 6 see column 10 line 17+.

With respect to claim 9 see column 16 lines 55+.

With respect to claims 10 and 11 see column 10 lines 65 - 66.

With respect to claim 25 see the Abstract.

With respect to claims 31 - 37 and 50 see column 6 line 50 - column 7 line 64.

With respect to claims 40 - 44 see column 9 lines 48 - 65.

With respect to claims 45 and 46 see column 8 lines 14 - 15.

With respect to claims 47 and 48 see column 11 lines 10 - 12.

With respect to claims 52 - 54, 57, and 62 - 66 see column 10 lines 37 - 60.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch et al.

Deutsch et al. do not specifically teach the polymeric binder as combined in claim 12 lines 2 - 4. However, Deutsch et al. individually teach hydroxyethylmethacrylate, cyclohexylmethacrylate, and methylmethacrylate. See column 16 lines 53 - 60 of Deutsch et al., for example. It would have been obvious to one of ordinary skill in the art to utilize a mixture or combination of the binders disclosed by Deutsch et al. to achieve the combined benefits of each of the different binders.

Claims 7, 8, 10, 13 - 20, 22 - 24, 38, 39, 51, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch et al. in view of Damme et al. (US 2003/0005838).

Deutsch et al. do not teach a polymeric binder and polymeric crosslinking material. Damme et al. teach a similar method including a polymeric binder (e.g. novolak) and crosslinking material (e.g. resole). See paragraphs 80 - 85 of Damme et al., in particular, paragraphs 82 and 85. It would have been obvious to one of ordinary skill in the art to provide the method of Deutsch et al. with a polymeric binder and crosslinking material in view of Damme et al. so as to provide a more durable image forming layer.

With respect to claims 8 and 17 Deutsch et al. teach the thermal treatment in column 9 line 48+.

With respect to claims 14 and 15 it would have been obvious to one of ordinary skill in the art through routine experimentation to arrive at the optimum percentage of crosslinking material.

With respect to claim 20 it would have been obvious to one of ordinary skill in the art to prepare the resole resin of Damme et al. from any known starting materials.

With respect to claims 23 and 24 Deutsch et al. do not teach a colorant in the image forming layer. However, see paragraph 92 of Damme et al. It would have been obvious to one of ordinary skill in the art to provide the method of Deutsch et al. with a colorant in view of Damme et al. in the recited percentage through routine experimentation to allow easier proofing of the imaged plate.

With respect to claims 38 and 39 Deutsch et al. do not teach the surface tension of the catalyst and carrier. However, see paragraph 59 of Damme et al. It would have been obvious to one of ordinary skill in the art to provide the method of Deutsch et al. with a catalyst and carrier having the recited surface tension in view of Damme et al. so as to jet consistent drops to the image forming layer.

With respect to claim 51 Deutsch et al. do not teach an additive in the image forming layer. However, see paragraph 91 of Damme et al. It would have been obvious to one of ordinary skill in the art to provide the method of Deutsch et al. with a surfactant in the image forming layer in view of Damme et al. so as to more easily coat the substrate.

With respect to claims 55 and 56 Deutsch et al. only teach that the pH of the developer may be 11 or higher. See column 10 line 37+ of Deutsch et al. Damme et al. teach that the pH may be as high as 14. See paragraph 103 of Damme et al. It would have been obvious to one of ordinary skill in the art to provide the method of Deutsch et al. with a developer having the recited pH in view of Damme et al. so as to provide sufficient developing power.

Claims 26 - 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch et al. in view of Agfa (UK 1 431 462). Deutsch et al. do not teach an acid catalyst. Agfa teaches a similar method including using sulfonic acid as a catalyst. See page 2 lines 13 - 18, page 2 line

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109 - page 3 line 53, and page 3 lines 126 - page 4 line 17, and page 5 lines 11 - 19 of Agfa. It would have been obvious to one of ordinary skill in the art to provide the method of Deutsch et al. with the step of applying an acid catalyst in view of Agfa as an alternative crosslinking process.

Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch et al. in view of Damme et al. (US 2003/0089259). Deutsch et al. do not teach treating the substrate with polyvinylphosphonic acid. However, see paragraph 106 of Damme et al., for example. It would have been obvious to one of ordinary skill in the art to treat the substrate of Deutsch et al. with polyvinylphosphonic acid in view of Damme et al. to provide the desired hydrophilicity to the substrate.

Claims 58 - 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deutsch et al. in view of Akiyama et al. (US 5,464,724). Deutsch et al. do not teach the ratio between the silicon oxide and metal oxide. See column 10 lines 37 - 45 of Deutsch et al. Akiyama et al. teach the ratio as recited. See column 22 line 12+ of Akiyama et al. It would have been obvious to one of ordinary skill in the art to provide the method of Deutsch et al. with the recited silicon oxide to metal oxide ratio in view of Akiyama et al. so as to sufficiently adjust the pH of the developer.

Claim 21 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record does not teach or render obvious the recited polymers in the image forming layer.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See the entire documents of Ma et al. ('653) and DeBoer et al. ('235), in particular, Ma et al.

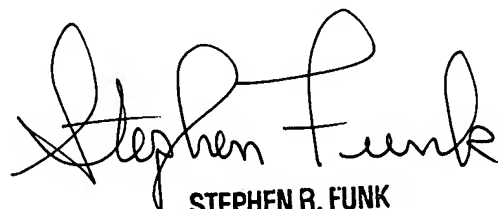
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen R. Funk whose telephone number is (571) 272-2164. The examiner can normally be reached M - F, except Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Hirshfeld, can be reached at (571) 272-2168.

The fax phone number for ALL official papers is (703) 872-9306. Upon consulting with the examiner *unofficial* papers only may be faxed directly to the examiner at (571) 273-2164.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

SRF
April 6, 2004



STEPHEN R. FUNK
PRIMARY EXAMINER